Chihway Chang

LAST UPDATED	July 5, 2025	
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ACADEMIC APPOINTMENTS

Co-PI and Deputy Director for Professional Learning, The NSF-Simons AI Institute for the Sky (SkAI Institute) 2025 – present
Associate Professor, Department of Astronomy and Astrophysics (A&A), University of Chicago 2025 – present
Assistant Professor, Department of Astronomy and Astrophysics (A&A), University of Chicago 2018 – 2025
Senior Member, Kavli Institute of Cosmological Physics (KICP), University of Chicago 2018 – present
Clare Boothe Luce Assistant Professor, Department of Astronomy and Astrophysics (A&A), University of Chicago 2018 – 2023
KICP Fellow, KICP, University of Chicago 2016 – 2018
Postdoctoral Fellow, Institute of Astronomy, ETH Zurich 2013 – 2016

EDUCATION

Physics Department, Stanford University Ph. D. 2013
Thesis: *Systematic Effects in Weak Lensing Measurements for Future Optical Surveys*
Advisors: Steven M. Kahn & Rafe H. Schindler

Physics Department, National Taiwan University B. S. 2007

HONOURS AND RECOGNITIONS

Scialog Fellow (Early Science with the LSST)	2024
Editor's choice in Physical Review Letters	2023
DOE Early Career Award	2021
Clare Boothe Luce Assistant Professor	2018
KICP Fellow	2016
Editor's choice in Physical Review Letters	2015
62nd Meeting of Nobel Laureate, Lindau, Germany	2012
Presidential Awards, National Taiwan University	2004 – 2007
Jen-Lin Huang Scholarship	2005 – 2006

SCIENTIFIC COLLABORATIONS

I am a core member and recognized builder (i.e., foundational contributor) in two large scientific collaborations – the Dark Energy Survey (DES) and the Rubin Observatory Legacy Survey of Space and Time Dark Energy Science Collaboration (LSST DESC). I am also a member of the Roman Space Telescope Project Infrastructure Team (PIT) team "Maximizing Cosmological Science with the Roman High Latitude Imaging Survey".

Dark Energy Survey (DES): I have been part of DES since 2013 and have been active in the weak gravitational lensing working group, as well as the general are of cosmology from large-scale structure. I am one of the two Science Committee Co-Chairs in DES, which directs and coordinates all scientific efforts within DES.

DELVE (DECam Local Volume Exploration Survey) Builder	2023 – present
DES Science Committee Co-Chair	2021 – present
DES Builder	2019 – present
DES Membership Committee	2019 – 2021
DES Management Committee	2018 – 2021

DES Weak Lensing Mass Mapping Analysis Team Lead 2016 – 2020

Rubin Observatory Legacy Survey of Space and Time Dark Energy Science Collaboration (LSST DESC): I have been active in LSST DESC since 2016 (and active in the LSST science working groups before the start of DESC in 2010). I primarily work in the weak gravitational lensing working group, as well as the general area of cosmology from large-scale structure. Initiated through my term as the Deputy Analysis Coordinator 2021-2023, I co-lead the STatic Analysis Roundtable (STAR) group.

LSST DESC Builder 2024 – present
DESC Speaker Bureau 2024 – present
Rubin in-kind contributor team (Science validation of PSF characterization) https://sitcomtn-050.lsst.io/ 2024 – present
LSST DESC Deputy Analysis Coordinator 2021 – 2023
LSST DESC Collaboration Council 2020 – 2021
LSST DESC Weak Lensing Working Group Coordinator 2018 – 2020

Professional Service and Recent Conferences Organized

Cosmological Synergies from Multiple Overlapping Probes Observed by Next Generation Surveys LOC/SOC 2025
Roman PIT meeting SOC 2024
Fundamental Physics meets Current and Future Facilities in Cosmology (Brazil) SOC 2024
KICP-20 "Cosmology past, present, and future" (KICP) LOC/SOC 2024
UChicago-Taiwan student research program in the Sciences (UCTS) organizer 2024
Spec-S5 Instrumentation Workshop (KICP) LOC 2024
Lensing at Different Scales Workshop (KICP) SOC 2023
DES Y6KP Workshop (KICP) LOC 2023
LSS $\times$ CMB Workshop (Kyoto) SOC 2023
DES Collaboration Meeting (Portsmouth) SOC 2023
LSST DESC Collaboration Meeting (KICP) LOC Co-Chair/SOC 2022
CMB-S4 Collaboration Meeting (remote) SOC 2020
Snowmass 2021 Topical Group Convener (CF6: Dark Energy and Cosmic Acceleration: Complementarity of Probes and New Facilities) 2020 – 2021
Cosmic Controversy (KICP) SOC 2019
Joint SPT-DES Analysis Workshop (KICP) 2018
DES Collaboration Meeting (Chicago) LOC 2017
Review panel for NSF, DOE 2020 – present
Reviewer for MNRAS, ApJ, Nature Astronomy, DES/DESC Collaboration 2014 – present

Department Service and Leadership

A&A Astro Lunch Chair 2024 – 2025
A&A Climate Committee Chair 2023 – 2024
UChicago PSD Equity, Diversity and Inclusion Coordination Team 2022 – 2024
A&A EDI Deputy Department Chair 2020 – 2024
A&A official graduate student faculty mentor 2018 – present
Various A&A and KICP committees: admission, faculty search, colloquium, A&A strategic plan, KICP budget and policy, KICP Fellow, KICP seminar, climate committee, KICP colloquium etc. 2018 – present

Scientific Proposals Awarded

Research grants that I have led or contributed to significantly. Total funding through grants, awards, and scholarships: **$2.3M**.

DOE FY2025 HEP Comparative Review, Theoretical High Energy Physics Research at the University of Chicagos, $XXX [Co-PI] 2025 – 2028

France and Chicago Collaborating in the Sciences (FACCTS) grant: Breaking Through Blending: A Multi-Survey Approach to Dark Energy with LSST, Euclid, and Roman, $12k [PI] 2025 – 2027

NSF AI in Astronomy Institute 2024, AI for the Sky: The SkAI Institute, $20M for the entire institute (not counted above) [Senior Personnel] 2024 – 2029

NSF AAG 2024, A Novel Approach to Constraining Baryonic Feedback: Coherent Field-Level Inference of Lensing and Electron Pressure, $458k [PI] 2024 – 2027

NASA Roman Space Telescope Project Infrastructure Team (PIT) 2023, Maximizing Cosmological Science with the Roman High Latitude Imaging Survey, $323k [Co-I] 2024 – 2029

NSF AAG 2022, Collaborative Research: Combining Galaxy and Cosmic Microwave Background Surveys for Precise and Robust Constraints on Cosmology, $250k [PI] 2023 – 2026

France and Chicago Collaborating in the Sciences (FACCTS) grant: Large-Scale Structure Simulations for Next Generation Cosmological Modeling, $25k [PI] 2022 – 2023

DOE Early Career Award 2021, Towards Robust Cosmology from Large-Scale Structure with Galaxy Surveys, $750k [PI] 2021 – 2026

NSF AAG 2020, Collaborative Research: Cosmic Shear on Extremely Large Scales with the Dark Energy Camera, $360k [PI] 2021 – 2024

DOE FY2020 HEP Comparative Review, Cosmology with Galaxy and CMB Surveys: Mitigating Systematic Effects Through Combining Datasets, $125k [PI] 2020 – 2022

University of Chicago Center for Data and Computing (CDAC) Data Science Discovery Grant – When Technology Transforms Society: Considering the Societal and Ethical Impacts of Quantum Computing and AI, $15k [PI] 2019 – 2020

UChicago seed funding, Mapping Dark Matter with the Faintest Galaxy, $40k [PI] 2018 – 2019

Other Proposals Awarded

Computing: Midway Research II Allocation, 2M hours [PI] 2024
Computing: Midway Research II Allocation, 2M+1M hours [PI] 2023
Computing: Midway Research II Allocation, 2M+M hours [PI] 2022
Computing: Midway Research II Allocation, 2M+1M hours [PI] 2021
Computing: Midway Research II Allocation, 2M hours [PI] 2020
Observing: Magellan 2020 B, 2 nights [PI] 2020 – 2022
Computing: Midway Research II Allocation, 1.3M hours [PI] 2019
Observing: Magellan 2020A, 2 nights [PI] 2019
Computing: Midway Research II Allocation, 1M hours [PI] 2018

Teaching

ASTR 298 (UChicago), Research Seminar: *Guest Lecturer* Spring 2024
ASTR 340 (UChicago) Statistical Methods in Astrophysics: *Instructor* Winter 2024, 2025
ASTR 18850 (UChicago) Interpreting Nature – on the Relation between Art and Science: *Instructor* Spring 2023, 2024, 2025
ASTR 406 (UChicago) Gravitational Lensing: *Instructor* Fall 2020
ASTR 133 (UChicago) Introduction to Astrophysics: *Instructor* Spring 2019, 2020, 2021, 2022
PHYS 372 (UChicago), Space Physics and Astrophysics: *Guest Lecturer* Fall 2016, 2018
Astrophysics I (ETH): *Substitute Lecturer* Fall 2015, 2014
Astrowoche (ETH): *Teaching Assistant* Spring 2016, 2015

Cosmological Probes (ETH): *Teaching Assistant and Substitute Lecturer* Spring 2014
Physics 21 (Stanford), Mechanics and Heat: *Teaching Assistant* Fall 2011
Physics 23 (Stanford), Electricity and Optics: *Teaching Assistant* Winter 2007
Physics 41 (Stanford), Light and Heat: *Teaching Assistant* Fall 2007

Advising and Mentoring

Postdocs and research scientists:

Chun-Hao To September 2024 – present
Eric & Wendy Schmidt AI Fellow at UChicago (serve as primary mentor). Primarily working in DES and Roman on simulations and cluster cosmology. Expert in combining galaxy cluster datasets across different wavelengths.

Marco Gatti August 2024 – present
KICP Fellow (serve as primary mentor). Primarily working in DES on weak lensing. Expert in higher-order statistics and new statistical techniques to extract cosmological information from data. Will also be transfering knowledge to LSST DESC.

Giulia Giannini October 2022 – present
Postdoc primarily working in DES on weak lensing and large-scale structure cosmology. Expert in redshift calibration and galaxy-galaxy lensing. Transfering knowledge to LSST DESC.

Yuuki Omori January 2021 – present
Working with SPT and my group. Expert in CMB lensing and cross-correlation between galaxy and CMB datasets. Also working on field-level inference for weak lensing. Transitioned from postdoc to research scientist in 2024.

Lucas Secco September 2020 – January 2024
KICP Fellow (served as primary mentor). Worked on DES cosmoc shear analysis and then helped with the DELVE cosmic shear analysis effort. Investigated lensing higher-order statistics as well as cosmic tensions. Moved on to Boston Consulting Group.

Judit Prat October 2019 – December 2023
Postdoc working on both DES and LSST DESC. Expert in weak lensing and large-scale structure cosmology and contributed to major infrastructure in both DES and DESC pipelines. Moved on to a Eric & Wendy Schmidt AI Fellow at UChicago (served as primary mentor), then a Nordita Fellow.

Graduate students:

Shrihan Agarwal December 2023 – present
PhD, UChicago A&A. Studying the impace of spatially varying systematic effects in weak lensing data for DES, DELVE and LSST. Won an 2023 NSF Graduate Research Fellowship.

Johnny Pitocco August 2023 – present
PhD, UChicago A&A. Joint advised with Jeff McMahon working on cosmology analysis with DES Y3 data and ACT DR6 lensing.

Jazmine Jefferson June 2022 – present
PhD, UChicago A&A. Working on reanalysis of Stage-III weak lensing data sets in the context of LSST. Won an 2021 NSF Graduate Research Fellowship.

Dhayaa Anbajagane September 2020 – present
PhD, UChicago A&A. Working on a wide array of topics in DES and DELVE: cluster profiles, higher-order statistics in lensing, and connection with early universe physics. Also leading the DELVE cosmic shear analysis. Won an 2020 NSF Graduate Research Fellowship and a 2023 CCAPP Price Prize in Cosmology and Astrophysics.

Georgios Zacharegkas October 2018 – August 2023
PhD, UChicago A&A. Studied the modeling of small-scale information in galaxy-galaxy lensing and galaxy clustering through the Halo Occupation Distribution framework and constrained the models with DES data. Moved on to a postdoc position at the Argonne National Lab.

Dimitrios Tanoglidis October 2017 – October 2019
PhD, UChicago A&A (primary advisor Alex Drlica-Wagner). Worked on investigating sample selection in clustering measurements. Moved on to Data Science Fellow at UPenn.

Yi Zhao September 2018 – December 2018
Master, UChicago PSD. Worked on galaxy-galaxy lensing measurement in simulations.

Marco Gatti October 2017 – May 2019
PhD, Barcelona A&A (primary advisor Ramon Miquel). Using DES data to perform higher-order statistics measurement and modeling. Moved on to a postdoc position at UPenn.

Claudio Bruderer October 2016 – June 2018
PhD, ETH Zurich A&A (primary advisor Alexandre Refregier). Develop a novel weak lensing shear estimation method based-on fast forward-modeling.

Undergraduate and post-bacc students:

Harjas Sandhu March 2024 – present
Major in Physics, UChicago. Joint advise with Eric Baxter. Working on using machine learning to perform background estimation for CMB datasets.

Kate Overdeck June 2023 – December 2023
Major in A&A, UChicago. Joint advised with Giulia Giannini and Josh Frieman to study galaxy clustering split by colors.

Louise Gagnon June 2022 – September 2023
Major in A&A, UChicago. Joint advised with Judit Prat on combining gravitational wave data and galaxy surveys.

Jon Shao June 2022 – June 2023
Major in Physics, UChicago. Joint advised with Dhayaa Anbajagane on looking at how baryonic effects impact cluster characteristics. Moved on to PhD program at Caltech.

Kihana Wilson December 2021 – June 2023
Major in A&A, UChicago. Joint advised with Judit Prat on studying the impact of deflection on weak lensing and clustering measurements.

Raul Basilides Gomez Del Estal Teixeira July 2021 – June 2024
Major in A&A, UChicago. Working on redshift estimation and calibration for the DELVE cosmic shear project. Moved on to PhD program at Duke.

Nathalie Chicoine July 2020 – August 2024
Major in A&A, UChicago. Joint advised with Judit Prat on measuring lensing around low surface brightness galaxies (LSBG), as well as cosmology from DELVE. Moved on to PhD program at UPitt.

Zhuoqi Zhang December 2019 – June 2023
Major in Physics, UChicago. Worked on combining CMB lensing and galaxy surveys for LSST DESC. Also worked on DELVE cosmic shear testing. Moved on to PhD program at Stanford.

Ariel Amsellem January 2019 – December 2020
Major in Physics, UChicago. Studied the splashback radius in simulations and compared to data. Moved on to PhD program at CMU.

Benjamin Levine December 2019 – 2021
Major in A&A, UChicago. Studies the effect of blending on cosmology from galaxy clustering in LSST. Moved on to PhD program at Stonybrooks.

Rebecca Chen October 2017 – May 2019
Major in A&A, UChicago. Worked on PSF modeling and measuring moments in weak lensing mass maps. Moved on to PhD program at Duke.

PUBLIC OUTREACH

Picture an Astronomer opening panel	2025
Adler SVL volunteer	2024 – present
UChicago myCHOICE workshop: Business of Running a Research Group	2023
Lecture and volunteer at Space Explorer	2023 – present
PSD Adler panel discussion	2023
Interview with the Chicago Council on Science and Technology (C2ST)	2022
Talk at the Ryerson Astronomical Society at UChicago	2021
Talk at Project Exploration (middle school students)	2021
Kavli Community Forum career panel	2021
GRADUCon 2021 panel	2021
UChicago PSD Women in STEM panel	2021
KIPAC career panel	2020
Panel at SLAC public lecture series	2020
Career panel in DES, SLAC	2018, 2020
Co-organizer of workshop "When Technology Transforms Society: Considering the Societal and Ethical Impacts of Quantum Computing and AI"	2019
APS Conferences for Undergraduate Women in Physics (CUWiP) Panel	2019
Public talk at the *Art of Science* series	2018
Volunteer at the Adler Planetarium: *Astronomy Conversations*	2016 – 2020
DES outreach program *DarkBites*: *Lead illustrator*, 50+ illustrations (`https://www.darkenergysurvey.org/education/darkbites/`)	2014 – 2015, 2021
SLAC tour guide	2010 – 2013

PRESS

Scientists release newly accurate map of all the matter in the universe [UChicago, 2023]

Less clumpy universe may suggest existence of mysterious forces [The Guardian, 2023]

Cosmological Parameters Improved by Combining Data [APS, 2023]

Connecting the dots in the sky could shed new light on dark matter [SLAC, 2020]

Dark Energy Survey reveals most accurate measurement of dark matter structure in the universe [Fermilab, 2017]

New map of Universe's dark matter [BBC, 2017]

Scientists Unveil New Inventory of Universe's Dark Contents [Quanta, 2017]

Erhellendes zur Dunklen Materie[Spiegel, 2017]

The Halo Boundary of Galaxy Clusters in SDSS [KICP, 2017]

Dark matter map unveils first results [BBC, 2015]

SELECTED TALKS

Invited talk at "COSMO-25: 28th International Conference on Particle Physics & Cosmology", Pittsburgh, PA — October 13, 2025 (scheduled)

Invited talk at "Beyond-2pt Statistics Meet Survey Systematics", Tokyo, Japan — September 16, 2025 (scheduled)

Invited talk at "Fundamental Physics meets Current and Future Facilities in Cosmology", Sao Paolo, Brazil — December 2, 2024

Lecture at the UChicago Data Science Institute Summer School, Chicago, IL — July 18, 2024

Invited talk at Gordon Research Conference "Imaging and Visualization at the Junction of Physics, Engineering and Data Science", Newry, MN — June 9, 2024

Keynote speaker at "COSMO21", Chania, Greece — May 20, 2024

UChicago DSI research highlight, Chicago, IL — May 16, 2024

KICP Colloquium, KICP, Chicago, IL — April 10, 2024

Invited talk at UPenn cosmology group, UPenn, Pennsylvania, PA — November 20, 2023

Invited talk at "KIPAC@20", SLAC, Menlo Park, CA — September 12, 2023

Invited talk at "Modified Gravity", UIUC, Urbana Champaign, IL — May 19, 2023

Overview talk, "LSS x CMB Workshop", Kyoto, Japan — April 10, 2023

Invited talk at Kahn Symposium, SLAC, Menlo Park, CA — March 3, 2023

Lecturer at "Cosmology on the Beach", Playa del Carmen, Mexico — November 30, 2022

Astronomy Seminar, University of Cincinnati, OH — November 1, 2022

Physics Colloquium, University of Kentucky, Lexington, KY — October 28, 2022

Plenary talk at “DECam at 10 Years Workshop”, Tucson, AZ — September 12, 2022

Discussion session at Higher-Order Statistics Workshop, Aspen, CO — June 5, 2022

Talk at CMB-S4 Collaboration Meeting, remote — March 13, 2022

EPFL Colloquium, remote — March 7, 2022

Astronomy and Astrophysics Colloquium, Chicago, IL — February 16, 2022

CIERA Astronomy Seminar at Northwestern, Evanston, IL — November 9, 2021

Plenary talk at “Rubin Project and Community Workshop”, remote — August 12, 2021

Invited review talk “Growth of Structure Summer Seminar Series”, remote — June 23, 2021

CITA Seminar, remote — March 28, 2021

Invited Panel for SLAC public talk series, remote — September 29, 2020

Invited talk at IPMU conference “Cosmic Acceleration”, Tokyo, Japan — February 17, 2020

Physics Colloquium, Kansas State University, Manhattan, KS — October 21, 2019

Invited talk at conference “Cosmic Controversy”, Chicago, IL — October 5, 2019

Plenary talk at conference “COSMO19”, Aachen, Germany — September 2, 2019

Invited talk at “LSST DESC Dark Matter Workshop”, Chicago, IL — August 5, 2019

Plenary talk at conference APS DPF, Boston, MA — July 31, 2019

Astrophysics Seminar, McGill University, Montreal, Canada — July 3, 2019

Plenary talk at “Quantum Theory and Symmetry-XI”, Montreal, Canada — July 2, 2019

Panelist at workshop ICG25, State College, PA — June 24, 2019

Fermilab Astrophysics Seminar, Baltavia, IL — June 10, 2019

Invited talk at LSST in South America, Sao Paulo, Brazil — December 18, 2018

Kavli Symposium, Oslo, Norway — September 1, 2018

Invited talk at COSPAR, Pasadena, CA, USA — July 16, 2018

Invited talk at APS, Columbus, OH, USA — April 17, 2018

UChicago Astro Seminar, Chicago, IL, USA	February 27, 2018
Rutgers Astro Seminar, New Brunswick, NJ, USA	February 19, 2018
Duke Physics Colloquium, Durham, NC, USA	February 14, 2018
University of Pittsburgh Physics Colloquium, Pittsburgh, PA, USA	January 30, 2018
UC Berkeley Physics Colloquium, Berkeley, CA, USA	January 23, 2018
Cosmology Group Meeting, CCA, NY, USA	November 9, 2017
Cosmology Seminar, Princeton/IAS, NJ, USA	November 6, 2017
Fermilab Astro Seminar, Fermilab, IL, USA	October 23, 2017
Astro/Cosmology Seminar, CMU, PA, USA	October 13, 2017
Astrophysics and Cosmology Seminar, UIUC, IL, USA	September 20, 2017
Cosmology Seminar, BNL, NY, USA	September 14, 2017
Instrumentation Seminar, BNL, NY, USA	September 13, 2017
The Nonlinear Universe, Smartno, Slovenia	July 20, 2017
Fermilab 50th User Meeting, Fermilab, IL, USA	June 8, 2017
KICP Colloquium, KICP, IL, USA	May 31, 2017
Astronomy Chalk Talk, U of Chicago, IL, USA	January 24, 2017
Cosmology Seminar, UCL, London, UK	December 21, 2016
Astronomy Colloquium, UIUC, IL, USA	November 1, 2016
KICP Friday Seminar, KICP, IL, USA	October 7, 2016
Cosmology Seminar, KIPAC, CA, USA	May 16, 2016
Kosmologietag Overview Talk, Bielefeld University, Germany	April 29, 2016
Astrophysics Colloquium, ASIAA, Taipei, Taiwan	March 28, 2016
RAS Specialist Discussion Meeting, London, UK	February 12, 2016
Swiss Python Summit, Rapperswil, Switzerland	February 5, 2016
Astrophysics Seminar, Rutgers University, NJ, USA	August 11, 2015
Cosmology Lunch, Princeton University, NY, USA	August 10, 2015
Fourteenth Marcel Grossmann Meeting (MG14) Rome, Italy	July 17, 2015
APS April meeting, Baltimore, MD, USA	April 14, 2015
Weekly Colloquium, IEEC-CSIC, Barcelona, Spain	October 8, 2014
Astrophysics Seminar, ASIAA, Taipei, Taiwan	September 19, 2014
Research Seminar Shanghai Jiao Tong University, Shanghai, China	September 9, 2014
DES-LSST Joint Workshop, Fermilab, IL, USA	March 24, 2014
Swiss Cosmology Day, ETH Zurich, Switzerland	February 6, 2014
ETH Research Seminar, ETH Zurich, Zurich, Switzerland	September 19, 2013
Astrophysics Seminar, JPL, CA, USA	September 2012
Special Seminar, IPMU, Tokyo, Japan	August 2012
SnowPAC, Snowbird, CO, USA	March 22, 2012

Publications

My overall h-index is 58 with a total citation of 12,997 (according to ADS). The following are the top 5 cited publications.

1. (citation: 1138) The Dark Energy Survey Collaboration, ...**C. Chang**... et al., *Dark Energy Survey Year 1 Results: Cosmological Constraints from Cluster Abundances and Weak Lensing*. PRD **102**, 023509 (2020). 2002.11124
2. (citation: 1025) The Dark Energy Survey Collaboration, ...**C. Chang**... et al., *Dark Energy Survey Year 3 Results: Cosmological Constraints from Galaxy Clustering and Weak Lensing*. PRD **105**, 023520 (2022) 2105.13549.
3. (citation: 659) The Dark Energy Survey Collaboration, ...**C. Chang**... et al, *The Dark Energy Survey Data Release 1*. ApJS **239**, 18 (2018) 1801.03181.
4. (citation: 606) M. Troxel, ...**C. Chang**... et al., *Dark Energy Survey Year 1 Results: Cosmological Constraints from Cosmic Shear*. PRD **98**, 043528 (2018) 1708.01538.
5. (citation: 392) A. Amon, ... **C. Chang**..., et al., *Dark Energy Survey Year 3 results: Cosmology from cosmic shear and robustness to data calibration*. PRD **105**, 023514 (2022), 2105.13543.

Full Publication List

Lead author (marked with * and bold numbers, including as first 1-3 authors or papers from students or postdocs I directly advise and have significant contributions) of 47+ refereed publications in weak gravitational lensing, cross-correlation, and other large-scale cosmology tropics. Contributing author of a total of 161+ publications. Full publication list available at ORCHID and ADS.

SUBMITTED JOURNAL PUBLICATIONS

161. J. Prat, M. Gatti, C. Doux, P. Pranav, **C. Chang**... et al., *Dark Energy Survey Year 3 results: w CDM cosmology from simulation-based inference with persistent homology on the sphere*. Arxiv e-print (2025) 2506.13439.
160. S. Pandey, ...**C. Chang**... et al., *Constraints on cosmology and baryonic feedback with joint analysis of Dark Energy Survey Year 3 lensing data and ACT DR6 thermal Sunyaev-Zel'dovich effect observations*. Arxiv e-print (2025) 2506.07432.
159. J. Jefferson, Y. Omori, **C. Chang***... et al., *Reanalysis of Stage-III cosmic shear surveys: A comprehensive study of shear diagnostic tests*. Arxiv e-print (2025) 2505.03964.
158. The Dark Energy Survey Collaboration, ...**C. Chang***... et al., **... et al., *Dark Energy Survey Year 3 Results: Cosmological Constraints from Cluster Abundances, Weak Lensing, and Galaxy Clustering*. Arxiv e-print (2025) 2503.13632.**
157. C, To, E. Krause, **C. Chang***... et al., *Dark Energy Survey: Modeling strategy for multiprobe cluster cosmology and validation for the Full Six-year Dataset*. Arxiv e-print (2025) 2503.13631.
156. The Dark Energy Survey Collaboration, ...**C. Chang**... et al., *Dark Energy Survey: implications for cosmological expansion models from the final DES Baryon Acoustic Oscillation and Supernova data*. Arxiv e-print (2025) 2503.06712.
155. D, Anbajagane, **C. Chang***... et al., *The DECADE cosmic shear project IV: cosmological constraints from 107 million galaxies across 5,400 deg^2 of the sky*. Arxiv e-print (2025) 2502.17677.
154. D, Anbajagane, **C. Chang***... et al., *The DECADE cosmic shear project III: validation of analysis pipeline using spatially inhomogeneous data*. Arxiv e-print (2025) 2502.17676.

153. D, Anbajagane, A. Alarcon, R. Teixeira, **C. Chang***... et al., *The DECADE cosmic shear project II: photometric redshift calibration of the source galaxy sample*. Arxiv e-print (2025) 2502.17675.

152. D, Anbajagane, **C. Chang***... et al., *The DECADE cosmic shear project I: A new weak lensing shape catalog of 107 million galaxies*. Arxiv e-print (2025) 2502.17674.

151. K. Bechtol, ...**C. Chang**... et al., *Dark Energy Survey Year 6 Results: Photometric Data Set for Cosmology*. Arxiv e-print (2025) 2501.05739.

150. M. Yamamoto, ...**C. Chang**... et al., *Dark Energy Survey Year 6 Results: Cell-based Coadds and Metadetection Weak Lensing Shape Catalogue*. Arxiv e-print (2025) 2501.05665.

149. K. McCullough, ...**C. Chang**... et al., *Dark Energy Survey Year 3: Blue Shear*. Arxiv e-print (2024) 2410.22272.

148. A. Campos, ...**C. Chang**... et al., *Enhancing weak lensing redshift distribution characterization by optimizing the Dark Energy Survey Self-Organizing Map Photo-z method*. Arxiv e-print (2024) 2408.00922.

147. E. Krause, ...**C. Chang**... et al., *Dark Energy Survey Year 3 Results: Multi-Probe Modeling Strategy and Validation*. Arxiv e-print (2021) 2105.13548.

146. C. Davis, ...**C. Chang**... et al., *Dark Energy Survey Year 1 Results: Cross-Correlation Redshifts in the DES – Calibration of the Weak Lensing Source Redshift Distributions*. ArXiv e-prints (2017) 1710.02517.

145. E. Krause, ...**C. Chang**... et al., *Dark Energy Survey Year 1 Results: Multi-Probe Methodology and Simulated Likelihood Analyses*. ArXiv e-prints (2017) 1706.09359.

Refereed Journal Publications

144. B. Thakore, ...**C. Chang**... et al., *High-significance detection of correlation between the unresolved gamma-ray background and the large-scale cosmic structure*. JCAP **2025**, 6 (2025) 2501.10506.

143. D. Anbajagane, ...**C. Chang**... et al., *Dark Energy Survey Year 6 Results: Synthetic-source Injection Across the Full Survey Using Balrog*. OJA **8** 65 (2025) 2501.05683.

142. B. Levine, J. Sanchez, **C. Chang***... et al., *Galaxy Clustering with LSST: Effects of Number Count Bias from Blending*. OJA **8** 38 (2025) 2411.14564 .

141. Xianzhe. Tang, ...**C. Chang**... et al., *Uniting the Observed Dynamical Dark Energy Preference with the Discrepancies in $\Omega_{\rm m}$ and H_0 across Cosmological Probes*. AJ Letter **983**, 1 (2025) 2412.04430 .

140. S. Bocquet, ...**C. Chang**... et al., *Multiprobe cosmology from the abundance of SPT clusters and DES galaxy clustering and weak lensing*. PRD **111** 063533 (2025) 2412.07765.

139. M. Gatti, ...**C. Chang**... et al., *Dark Energy Survey Year 3 results: simulation-based cosmological inference with wavelet harmonics, scattering transforms, and moments of weak lensing mass maps II. Cosmological results*. PRD **111** 6 (2025) 2405.10881.

138. T. Schutt, ...**C. Chang**... et al., *Dark Energy Survey Year 6 Results: Point-Spread Function Modeling*. OJA **8** 26 (2025) 2501.05781.

137. C. Y. Tan, ...**C. Chang**... et al., *A Pride of Satellites in the Constellation Leo? Discovery of the Leo VI Milky Way Satellite Galaxy with DELVE Early Data Release 3*. AJ **979** 2 (2025) 2408.00865.

136. L. Faga, ...**C. Chang**... et al., *Dark Energy Survey Year 3 Results: Cosmology from galaxy clustering and galaxy-galaxy lensing in harmonic space*. MNRAS **536** 2 (2025) 2406.12675.

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